REMARKS

In light of the arguments presented in the final rejection and in the appeal conference, Applicants respectfully request reconsideration of the pending claims in conjunction with the co-filed Request for Continued Examination.

To better contrast the claimed subject matter from the cited prior art, consider again the receiver architectures shown in Applicants' Figures 1 and 3. For example, in Figure 1, a GPS receiver 103 and a wireless communication receiver 101 share an oscillator 108. Because the oscillator may vary its output frequency during, for example, handoffs between one base station and another, its output frequency is not necessarily known. This presents a problem, however, for GPS receiver 103 in that this information is necessary for an accurate position determination.

Applicants thus claim an accurate technique for the measurement of output frequency in a communication device. An accurate measurement is enabled through the use of a reference signal having a known time duration. As discussed by the Applicants, for example, on page 9, lines 1-20, there are a variety of signals in communication protocols that have a known duration. For example, in a CDMA wireless telecommunications network, a "short code" is broadcast over a pilot channel with a duration of 26.67 milliseconds. Similarly, in a GSM network, the starting points of successive multi-frames are separated by a known time duration.

As further discussed by the Applicants, for example, on page 9, lines 21-34, these reference signals of known duration enable the measurement of an oscillator output frequency. To do so, a counter is reset at the beginning of the reference signal. The counter counts each oscillation cycle for the oscillator output signal during the reference time period defined by the reference signal. At the end of the reference signal, the counting is disabled. Thus, the output frequency is the number of cycles counted divided by the reference time period.

Claim 14 reflects these advantageous features by reciting the acts of:

"detecting a beginning time point of the reference signal received by the communication device" – see, e.g., page 9, lines 22-23.

"upon detection of the beginning time point of the reference signal, enabling a counter to count in accordance with a clock signal derived from the oscillator" – see, e.g., page 9, lines 23-25.

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"detecting an ending time point of the reference signal received by the communication device" – see, e.g., page 9, lines 28-29.

"upon detecting the ending time point of the reference signal, disabling the counter to stop the counter from further counting" – see, e.g., page 9, lines 28-29.

"determining the frequency of the oscillator based on the count in the counter and an expected time that elapsed between the beginning time point and the ending time point" -- see, e.g., page 9, lines 29-34.

The cited Syrjarinne reference (USP 6,925,292) stands in sharp contrast. In particular, note that Syrjarinne does not teach or suggest the sharing of an oscillator between its GPS module and cellular module of its Figure 1. Instead, Syrjarinne uses a separate oscillator and local clock (element 18) in its GPS module. As known in the GPS arts, its output frequency is known and tightly controlled – e.g., Syrjarinne notes that its output frequency is 50 MHz with a jitter of only 6 meters. (Col 8, lines 38-40). Thus, under no circumstances is Syrjarinne interested in measuring the output frequency of it local clock – that frequency is known to be 50 MHz and tightly controlled to be just that. As discussed above, Applicants faced a starkly different environment in which a signal is derived from a local oscillator having a varying output frequency.

Instead of being directed to the problems derived from a shared oscillator, Syrjarinne is directed to the transmission of GPS time received over the cellular link to the GPS module (see, e.g., the abstract). As part of this transmission, a trigger signal is submitted from the cellular module to the GPS module (was supposed to be labeled as element 23 in Figure 1 but instead is just shown as "trigger signal"). This trigger signal is generated when the frame edge of the cellular message encoding the GPS time is received by the Syrjarinne cellular module. Syrjarinne latches a register 19 in the GPS module when the trigger signal is received. This register stores the local GPS time responsive to the trigger signal (Col. 8, lines 14-25). At this point, Syrjarinne determines its position-velocity-time (PVT) determination through conventional GPS measurements. Syrjarinne then "determines the difference in time between the time for which the PVT solution was obtained and the time when the frame edge arrived triggering the timing register.

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Syrjarinne does indeed use the frame edge of the cellular message having the GPS time to initiate its trigger signal. But all that trigger signal does is latch register 19 to store the local time. Never is the time duration of the cellular message used. Nor is there the stopping

of any counter in response to the trailing edge of the cellular message. There is thus no teaching or suggestion in Syrjarinne for the advantageous acts recited in claim 14. Accordingly, claim 14 and its dependent claims are allowable over Syrjarinne.

Apparatus claim 34 and its dependent claims are allowable over Syrjarinne for analogous reasons as discussed with regard to claim 14.

In addition, Applicants have amended the specification to update status of the disclosed applications and to include the priority claim made during filing. Also, some minor typographical errors were addressed as well.

A replacement sheet for Figure 1 addresses a typographical error.

Finally, claim 14 was also amended to address some minor typographical errors.

For the foregoing reasons, the pending claims are in condition for allowance.

If there are any questions regarding any aspect of the application, please call the undersigned at (949) 752-7040.

Certification of Facsimile Transmission

I hereby certify that this paper is being facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Jonathan Hallman

May 7, 2007
Date of Signature

Respectfully submitted,

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